

IN THE ABSTRACT:

Please cancel the existing abstract, and substitute therefor the following substitute abstract:

A3 Apparatus, and an associated method, by which to form biorthogonal codes utilized in a multi-dimensional modulation scheme. In one implementation, biorthogonal coding is provided in a cellular communication system in a manner that minimizes correlation of pairs of coordinates utilized in the communication system. Data that is to be communicated by a sending station is first modulated by a binary phase shift keying modulation. These first-modulated values are used by a mapper that maps the values to selected dimension values. And, the selected dimension values into which the first-modulated values are mapped are used to select biorthogonal code values.